

*Canada*

MANITOBA  
SASKATCHEWAN  
ALBERTA

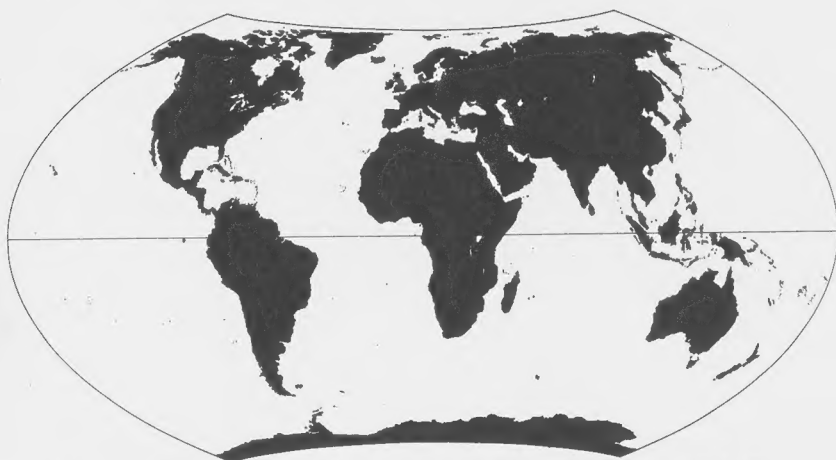
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# NATURAL RESOURCES

A BRIEF COMPILATION BEARING ON THE  
NATURAL RESOURCES OF THE  
PRAIRIE PROVINCES



Natural Resources Intelligence Branch  
Department of the Interior  
Ottawa, Canada  
1919

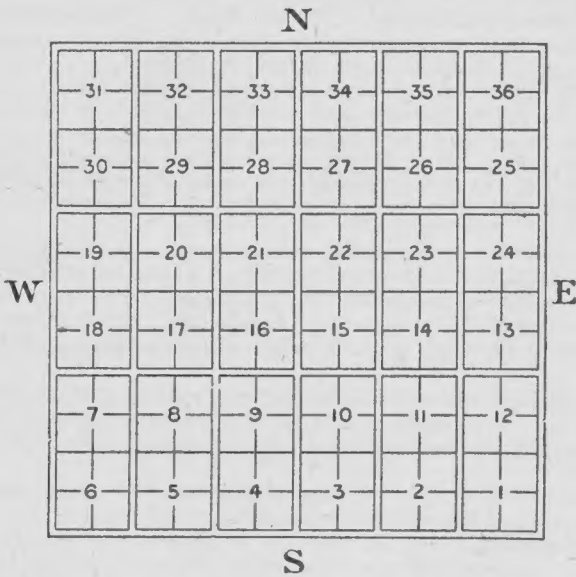


GIFT OF D.W. MEINIG - JUNE 1968  
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SYSTEM OF SURVEY OF DOMINION LANDS

Dominion Lands are laid off in square townships containing thirty-six sections of as nearly one mile square as the convergence of meridians permits. Such sections are bounded and numbered as shown in the township diagram below.

PLAN OF A TOWNSHIP



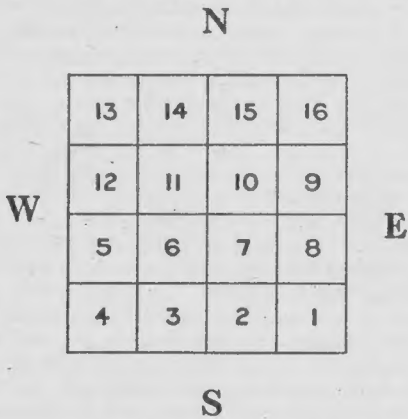
A section contains six hundred and forty acres. Each section is divided into four quarter-sections containing one hundred and sixty acres each.

Road allowances are provided as indicated by double lines on the above diagram, namely: running north and south between each section; running east and west, along the township lines and the lines two miles distant therefrom.

Townships are numbered consecutively from south to north. Each row of townships thus formed is given a range number. The ranges start from a Principal meridian and are numbered consecutively. The first meridian is a few miles west of Winnipeg. Ranges number from this meridian as a starting point, both eastward and westward. In regard to all other meridians, ranges number westward only.

It will be seen that when numbers for the township, range, and meridian are known, the exact location of the township is known.

PLAN OF A SECTION



Each section is deemed to be divided into forty-acre areas, known as legal subdivisions and numbered and bounded as in the diagram above.

## SYNOPSIS OF CANADIAN NORTHWEST LAND REGULATIONS

**What Land Available.**—All surveyed agricultural Dominion Lands in Manitoba, Saskatchewan, Alberta, and 3,500,000 acres in northern British Columbia, known as "Peace river block," which are not disposed of and not reserved or occupied, are open to homestead entry.

Islands are reserved from entry.

An entry does not include the Mineral or Water Rights.

Lands within 15 miles of a railway are reserved for Soldier Settlement.

**Who may Make Homestead Entry.**—The sole head of a family, or any male over eighteen (18) years old, may homestead one (1) quarter-section of available Dominion land in Manitoba, Saskatchewan, Alberta, or Peace river block in British Columbia. Applicant must appear in person at the Dominion Lands Agency or Sub-Agency for the district. Entry by proxy may be made at any Dominion Lands Agency (but not Sub-Agency), on certain conditions.

**NOTE.**—No application for an entry for a homestead shall be granted unless the person making the application was at the commencement of the war, and has since continued to be a British subject or a subject of a country which is an ally of His Majesty, or a subject of a neutral country, and unless he establishes the same to the satisfaction of the Minister of the Interior. This does not apply to members of the Canadian Expeditionary Forces naturalized since the war began.

An Agent may reserve one (1) available quarter-section as a homestead for a minor over seventeen (17) years of age until he is eighteen (18), on certain conditions.

**Where Entry is made.**—Application for homestead entry may be made by a person eligible under the provisions of "The Dominion Lands Act," either at the Land Agency for the district in which the land is situated, or at the office of a Sub-Agent authorized to transact business in the district.

**Duties.**—Six (6) months' residence upon and cultivation of the land in each of three (3) years. A homesteader may live within nine miles of his homestead on a farm of at least eighty (80) acres, on certain conditions. A habitable house is required, except where residence is performed in the vicinity.

The area of cultivation is subject to reduction in case of rough, scrubby or stony land. Live stock may be substituted for cultivation under certain conditions.

**When to Begin Residence.**—A homesteader is allowed six (6) months from the date of his entry within which to perfect the same by taking possession of the land and beginning his residence duties. Any entry not so perfected within that period is liable to cancellation.

## SYNOPSIS OF SOLDIER SETTLEMENT ACT

The Soldier Settlement Act applies to soldiers who have been honourably discharged or left the forces after having served in an actual theatre of war, or outside the country in which they enlisted, or in the case of the Canadian Expeditionary Force, after having served in Canada only and having received injury or disability due to service for which pension has been granted; or the widows of any soldiers who died on such service.

The Soldier Settlement Board is invested with authority and provided with funds for the purchase of lands situate in any part of Canada which are suited for immediate settlement by soldiers. They are also empowered to purchase stock, equipment, and building material for sale to soldier settlers. Sales are to be at cost price to the Board. In every case, before assistance from the Board can be obtained, the soldier must pass a qualification council, which acts in an advisory capacity to the Provincial Supervisor of the Board, at least one of which is established in every province, which qualification council determines whether or not the applicant is reasonably certain to succeed as a farmer. As far as possible, the Board desires that the soldier shall select his own land. If the soldier qualifies and the land selected is deemed such as will enable him, by proper application, to earn for himself a living thereon and to pay for it, the purchase is made through the assistance of the Board, the soldier being asked to pay ten per cent of the purchase price in cash. Not more than \$4,500 must be left outstanding and owing the Board at the time of sale. Provision is, however, made to cover cases of men who may not be able to pay the ten per cent, but who have already had successful farming experience in Canada and who are otherwise so qualified or equipped as to specially fit them as farmers. In these cases the whole or part of the ten per cent may be dispensed with, and, consequently, a balance may be left owing by them up to \$5,000. The rate of interest on the balance is to be five per cent, and all is to be repayable on the amortization plan by twenty-five annual instalments.

The Board is also given authority to provide the soldier with implements and stock up to a maximum value of \$2,000, which is repayable in four equal annual instalments, commencing in the third year, there being no interest charges thereon for the first two years. The rate of interest shall be 5 per cent. A further assistance may also be given the soldier by way of an advance up to \$1,000 for permanent improvements, including the value of building materials supplied. This advance shall be a charge on the land and is repayable on the amortization plan in twenty-five equal annual instalments with interest at five per cent per annum.

While the amounts owing the Settlement Board remain unpaid, the land and goods supplied are fully protected from seizure to the prejudice of the Board, nor can sales or charges be made without the Board's consent. The crops grown are protected from seizure to the extent of the obligations due the Board, or to fall due within a reasonable time after seizure.

The soldier who is eligible by reason of military service to benefit under the Act, may make entry in the prescribed manner and have reserved from any available Dominion lands, prior to the decision of the qualification committee, but on the recommendation of the provincial supervisor, what land he desires, but he shall not take possession or have any rights in respect thereto until the final decision of the Board is given.

If a soldier having obtained loans, etc. through the Board fails to comply with all the agreements entered into by him with the Board, he may have such agreements cancelled and the property revested in the Board absolutely free and discharged of all rights and claims and at no loss or expense to the Board.

For detailed information with regard to the Soldier Settlement Act and to the settlement of soldiers on the land, or for the addresses of the various provincial supervisors, apply to the Secretary, Soldier Settlement Board, Ottawa.

## SYNOPSIS OF REGULATIONS GOVERNING THE GRANTING OF GRAZING LEASES

Grazing leases of vacant Dominion Lands unfit for agricultural purposes may be issued to British subjects for a period of ten (10) years. The lands covered shall not be open to settlement during continuance of the lease.

No person or company shall be permitted to hold under lease more than 12,000 acres.

The lessee shall, within each of the three (3) years from the date of the lease, place upon the tract of land leased not less than one-third of the whole number of stock which is required to be placed upon the leasehold, namely, one (1) head of cattle, or five (5) head of sheep, for every thirty (30) acres of land covered by the lease, and shall during the rest of its term, maintain stock thereon in that proportion, and at least 25% of the stock shall be breeding stock.

The lessee shall be required to enclose his leasehold by a suitable fence.

The lessee shall pay an annual rental at the rate of ~~two cents (2c)~~ <sup>4</sup> per acre for every acre covered by the lease, payable half-yearly in advance.

The lessee shall be entitled to the hay on his leasehold and he may cultivate any portion of his leasehold for the purpose of growing winter feed for his stock, but shall not have the right to dispose of any such feed or hay by barter or sale.

Yearly grazing permits are issued on School Lands expiring the 1st of April following the date of issue, but are renewable at the option of the Department provided application for renewal, accompanied by the rental for the following year, is made before the 1st of February of each year. All applications for grazing permits or renewals thereof should be made direct to the Agent of Dominion Lands for the district in which the land is situated. The yearly rental is six cents per acre in Manitoba and four cents per acre in Saskatchewan and Alberta.

## SYNOPSIS OF REGULATIONS GOVERNING THE GRANTING OF TIMBER BERTHS

Timber Berths shall be disposed of by public auction at the office of the Dominion Timber Agent for the district in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five (25) square miles.

No berth shall be disposed of until notice of the sale has been given for a period of not less than sixty (60) days in a newspaper published in the district in which the berth is located and also in a newspaper having a general circulation in the province.

Purchases to the amount of One Thousand Dollars (\$1,000) or under shall be paid in cash at the time of sale. Purchases over One Thousand Dollars (\$1,000) shall be paid part cash and balance covered by notes bearing interest at rate of five per cent (5%) per annum.

The licensee shall be entitled to a renewal of his license from year to year subject to the regulations in force at the time renewal is made, while there is on the berth a sufficient quantity of merchantable timber as described in the license.

The licensee shall pay an annual ground rent of Five Dollars (\$5) per square mile, except for lands west of Yale, British Columbia, in which case the rent shall be five cents (5c) per acre. The licensee shall also pay one-half the cost of fire-protecting his berth.

**Timber for Homesteaders:**—Any occupant of a homestead quarter-section having no suitable timber of his own may obtain a free permit to cut a stated quantity of building timber, fencing timber or fuel as he may require for use on the land he owns and occupies. If he requires a further quantity for the purpose mentioned he must pay the dues specified in clause (a) of section 42 of the regulations.



## SYNOPSIS OF REGULATIONS GOVERNING THE GRANTING OF MINERAL RIGHTS

**Coal:**—Coal mining rights may be leased for a period of twenty-one years (21) years renewable at an annual rental of One Dollar (\$1) an acre. Not more than 2,560 acres shall be leased to one applicant. A royalty at the rate of five cents (5c) per ton shall be collected on the merchantable coal mined.

A fee of Five Dollars (\$5) shall accompany each application for a lease. This fee will be refunded if the rights applied for are not available, but not otherwise.

**Petroleum and Natural Gas:**—The Petroleum and natural gas rights which are the property of the Crown may be leased to applicants at a rental of twenty-five cents (25c) per acre, for the first year, and for each subsequent year a rental at the rate of fifty cents (50c) an acre, payable yearly in advance. The term of lease shall be twenty-one (21) years, renewable for a further term of twenty-one (21) years.

Application for a lease shall be made by the applicant in person to the Agent of Dominion Lands for the district in which the rights applied for are situated; or to a sub-agent for such district for transmission to the Agent. In case the location is in unsurveyed territory it shall be staked out by the applicant in person.

A fee of Five Dollars (\$5) and the rental for the first year shall accompany each application for a lease. This fee and rental will be refunded if the rights applied for are not available, but not otherwise.

**Placer Mining:**—Any person over eighteen (18) years of age may enter for mining purposes, locate, prospect and mine for minerals upon any lands the right to which entry, prospecting and mining is vested in or reserved to the Crown, except lands within the boundaries of a city, town or village, as defined by any provincial law or ordinance or specified by the Minister, or lands occupied by a building, or within the curtilage of a dwelling house, or lands lawfully occupied for placer mining purposes, or which form part of an Indian or other reservation.

An application for a grant of a claim shall be filed with the mining recorder within ten (10) days after the location thereof, if the claim is located within ten (10) miles of the mining recorder's office.

One (1) extra day shall be allowed for every additional ten (10) miles or fraction thereof.

**Limestone, Granite, Slate, Marble, Gypsum, Marl, Gravel, Sand, Clay or any Building Stone:**—Dominion lands containing limestone, granite, slate, marble, gypsum, marl, gravel, sand, clay or any building stone may be leased by the Minister at an annual rental of One Dollar (\$1) per acre, payable yearly in advance, for the purpose of quarrying out and removing therefrom stone or other material mentioned herein.

The term of the lease shall be twenty-one (21) years, renewable for a further period of twenty-one (21) years.

The maximum area of a quarrying location shall be forty (40) acres, and no person shall be allowed to locate more than one (1) location.

Application for a location comprising surveyed land shall be filed by the locator in person with the Agent of Dominion Lands for the district in which the location is situated. In unsurveyed territory no location is to be staked out.

A fee of Five Dollars (\$5) shall accompany each application for a lease. This fee will be refunded if the rights applied for are not available, but not otherwise.

**Quartz Mining:**—Any person having discovered mineral in place may locate a claim 1,500 by 1,500 feet by marking out the same with three (3) legal posts, one at each end of the location line, and a third at the spot where the mineral in place has been discovered. The two (2) location posts must have the name of the claim, a description of the ground, date of location and locator's full name written legibly upon them. The discovery post shall be marked "Discovery Post," and No. 1 post marked "Initial Post."

The claim shall be recorded within fifteen (15) days if located within ten (10) miles of a Mining Recorder's office; one (1) additional day allowed for every additional ten (10) miles or fraction thereof. The fee for recording a claim is Five Dollars (\$5.)

At least One Hundred Dollars (\$100) must be expended on the claim each year or paid to the Mining Recorder in lieu thereof. When Five Hundred Dollars (\$500) has been expended or paid, the locator may, upon having a survey made, and upon complying with other requirements, lease the land, and permission may be granted to group any number of adjoining claims up to eight (8) in number for representation work, upon taking out a certificate of partnership before the commencement of the work.

If any person satisfies the recorder that he is about to undertake a bonafide prospecting trip and files a power of attorney from any number of persons not exceeding two (2) authorizing him to stake claims for them in consideration of their having enabled him to undertake the trip, he may stake one (1) claim in the name of each such person upon any lode or vein which he may discover.

There are also regulations governing the issue of leases to dredge for minerals in the beds of rivers, and regulations governing the leasing of deposits of potash on Dominion lands.

**Clay:**—Clay locations are leased upon the condition that a plant suitable for the manufacture of brick or other clay products shall be erected within two (2) years from the date of the

lease, and further that in each year of the term of the lease after the second year there shall be produced ready for shipment not less than One Hundred Thousand (100,000) bricks or their equivalent in some other form.

## SYNOPSIS OF THE PROVISIONS OF THE IRRIGATION ACT FOR THE GUIDANCE OF APPLICANTS FOR WATER RIGHTS

**Preliminary Surveys.**—In the majority of cases where water is to be diverted from any source, to be used for domestic or irrigation purposes, a preliminary survey is required to prove the scheme feasible before an application is filed for a water right. In most instances the owners of land, whose property it may be necessary to cross will not offer any objection, but should any objection be offered the applicant may obtain a license from the Commissioner of Irrigation to make such preliminary survey.

**Memorials.**—Every applicant for a water right for any of the purposes authorized by the Irrigation Act is required to file a memorial containing information as to the character and location of the works to be constructed and the rights applied for. Blank forms of memorial may be obtained from the Commissioner of Irrigation, at Calgary, Alberta.

**Permission to construct ditches or other works across road allowances or surveyed highways.**—If the proposed scheme includes any crossings over road allowances or public highways the consent of the Minister of Public Works for the province within which such works are situated must be obtained before the works are constructed.

**Permission to construct works across railway lines.**—In cases where the crossing of a railway line by an irrigation ditch or other works is required, permission must be had from the Railway Company or the Board of Railway Commissioners, as may be required.

**Plan to accompany applications.**—The memorial filed in connection with an application for a water right must be accompanied by a general and detail plan, showing the location and character of the proposed works.

**General Plan** is intended to show the location of the works to be constructed and the lands to be irrigated therefrom or which are affected thereby, as a record of the rights applied for.

**Detail Plan.**—This plan shall show exactly all the main details of the structures to be erected in connection with the proposed undertaking.

Full and detailed instructions regarding the preparation of these plans will be forwarded upon application to the Commissioner of Irrigation, at Calgary, Alberta.

**Notices.**—Section 19 of the Act provides for the publication of notice of rights applied for. This notice will be prepared by the Commissioner of Irrigation as soon as the application has been approved, and will be forwarded to the applicant with the necessary instructions for publication in newspapers named by the Commissioner.

**Approval of application and authorization to construct works.**—When the memorial and plans have been approved by the Commissioner, the required notice of the application published, and permission has been given to construct the proposed works across road allowances, etc., authorization will be issued for the construction of the works as shown by the memorial and plans filed, and a period of time will be specified within which the works should be completed.

**Right of way for proposed ditches or other works.**—All necessary right of way should be acquired by applicants for water rights before proceeding to construct any works across lands not owned or controlled by the applicant.

To aid in irrigation development the Government grants free right of way over vacant Dominion lands.

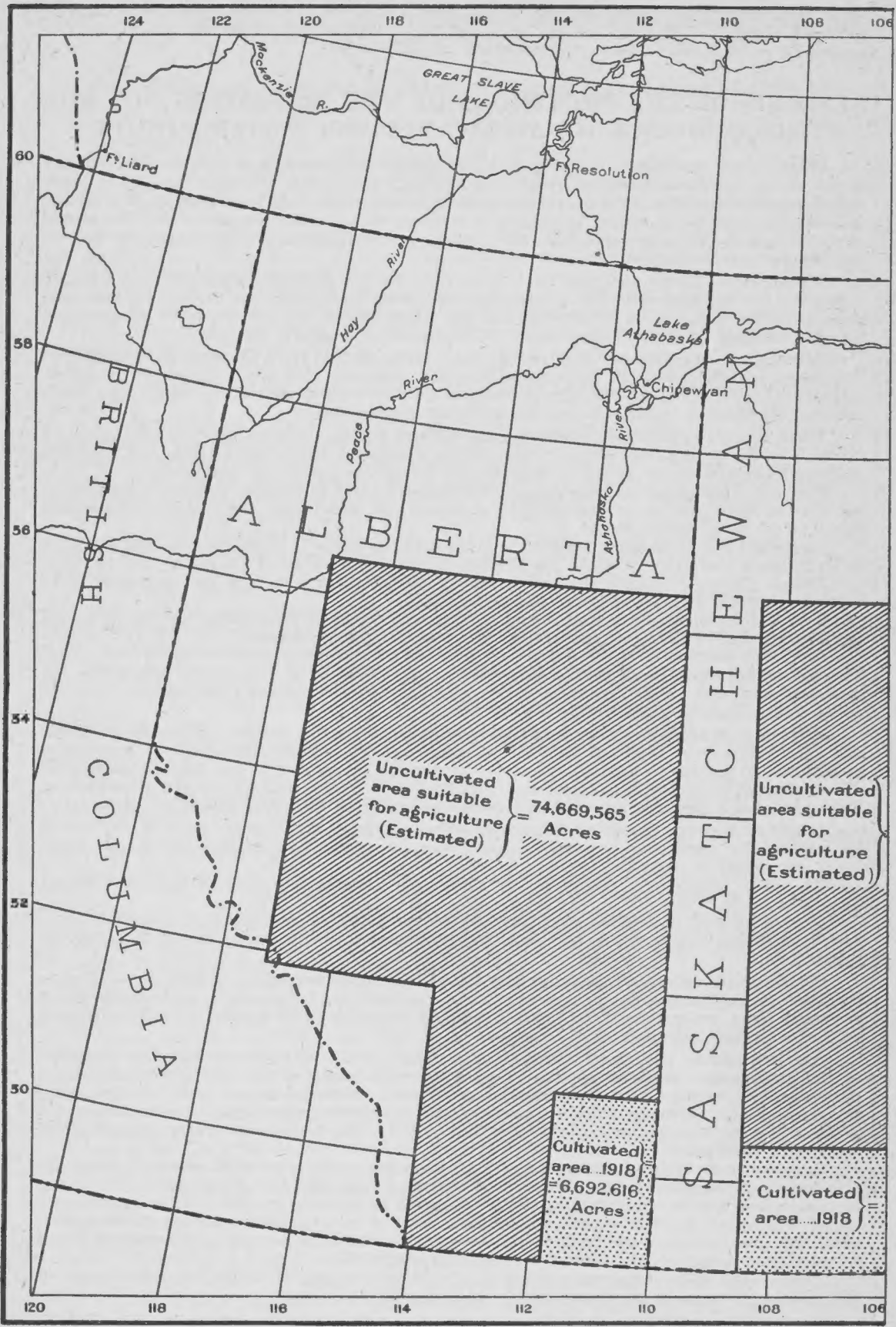
If right of way is required over privately owned lands, an agreement or easement across such land should be secured, in triplicate, and submitted to the Commissioner of Irrigation for registration.

**Agreements to use water from any canal, ditch or reservoir.**—Where it is desired to irrigate from any canal, ditch or reservoir, lands which are not the property of the applicant for the water right, an agreement with each individual owner for the irrigation of such lands must be filed with the Commissioner of Irrigation.

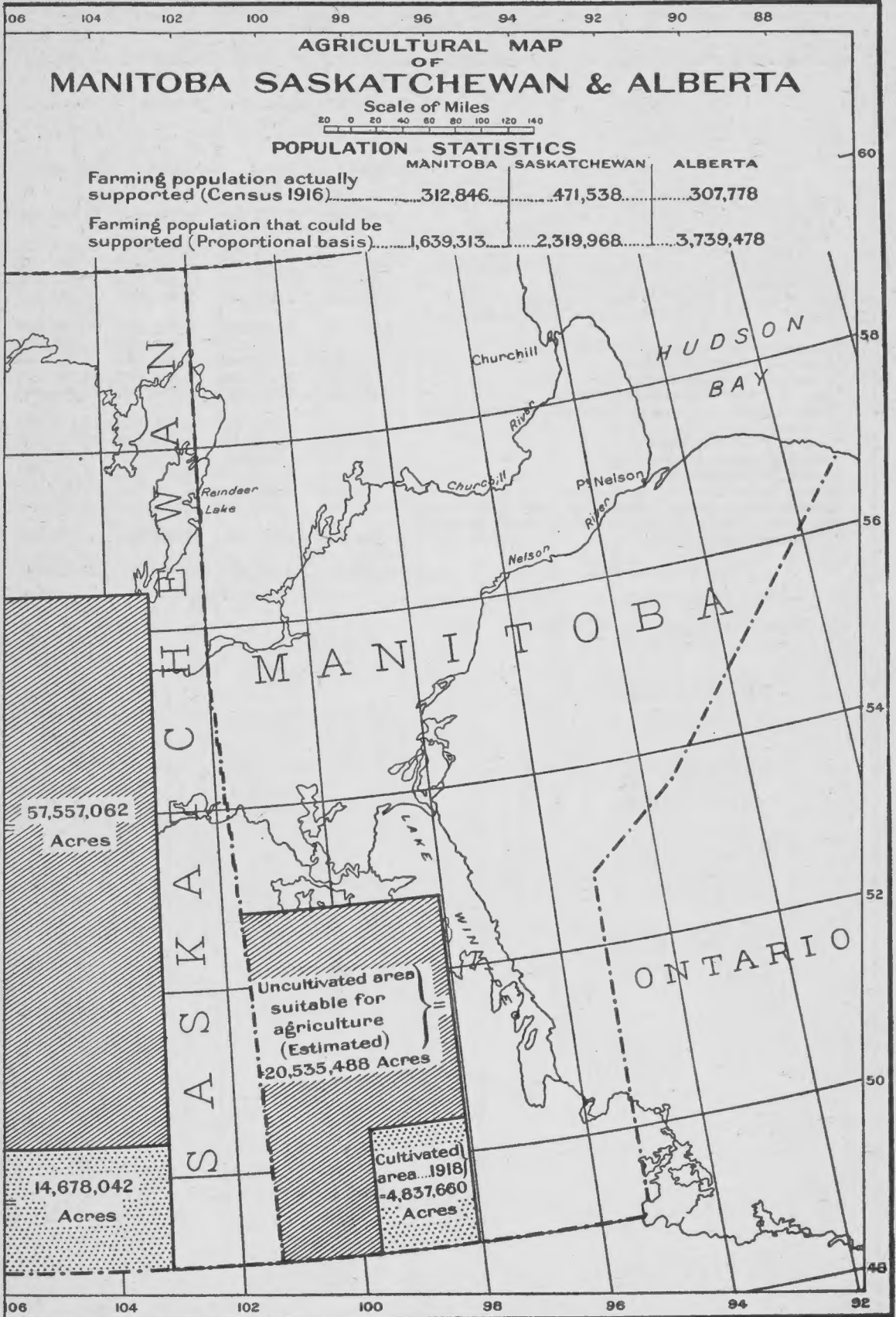
**Application to use water through any canal, ditch or reservoir not the property of the applicant.**—When an applicant for a water right wishes to take water through another person's works, he must submit a memorial and plans in the usual manner; also an agreement, in quadruplicate, which shall bind the party owning or operating the original works to carry the applicant's water through these works from the point of intake to the point where the applicant's own works commence.

**License to divert and use water.**—When irrigation works in connection with any application have been completed, and all questions regarding right of way, agreements to use water, etc., have been settled, an inspection of the works will be made by an officer of the department, and if it is found that the works have been constructed in accordance with the memorial and plan filed, a water license will be issued to the applicant for the water applied for upon payment to the Commissioner of Irrigation of the regulation fee of \$10.

**Note.**—For fuller information apply to the Superintendent of Irrigation, Department of the Interior, Ottawa, or the Commissioner of Irrigation, at Calgary.







DETAILED STATEMENT OF SURVEYED AREAS IN MANITOBA, SASKATCHEWAN AND  
ALBERTA, JANUARY 1, 1919.

Lands.	Manitoba.	Saskatche- wan.	Alberta.	Total.
	Acres.	Acres.	Acres.	Acres.
Area under Homestead (including Military Home- steads).....	8,417,400	27,133,700	18,145,500	53,696,600
Area under Pre-emption and Pur. Hds. (1st Sept. 1908 to 20th March, 1918).....		5,854,200	2,825,300	8,679,500
Area under Half-Breed Scrip, sales, special grants, etc.	5,087,400	2,302,000	1,223,300	8,612,700
Area granted to Railway Companies.....	3,566,997	15,177,063	13,120,014	31,864,074
Area granted to Hudson's Bay Company.....	1,210,000	3,087,000	2,092,000	6,389,000
Area of School Land Endowment (1/18 of area sur- veyed in sections).....	1,624,600	3,932,000	3,722,800	9,279,400
Area sold under Irrigation System.....		76,672	980,850	1,057,522
*Area under Timber Licenses.....	1,079,300	1,119,200	1,353,100	3,551,600
*Area under Grazing Leases.....	82,700	3,009,100	2,902,400	5,994,200
*Area of Forest Reserves and Parks.....	2,606,400	6,195,700	16,754,700	25,556,800
*Area reserved for Forestry Purposes (inside surveyed tract).....	746,300	1,430,000	1,677,500	3,853,800
*Area of Road Allowances.....	973,000	1,464,000	1,276,500	3,713,500
Area of Parish and River Lots.....	505,200	82,500	118,600	706,300
Area of Indian Reserves.....	433,860	1,119,454	1,367,974	2,921,288
Area of Indian Reserves surrendered.....	87,560	344,414	302,228	734,202
*Area of Water-Covered Lands (inside surveyed tract)	4,246,300	1,902,300	2,285,050	8,433,650
Area now available for entry (includes lands reserved for soldiers' settlement).....	4,788,000	4,607,300	15,000,000	24,395,300
Total surveyed area.....	35,455,017	78,836,603	85,147,816	199,439,436

\*Area not available for cultivation.

## ACREAGE AND PRODUCTION OF CROPS 1917 AND 1918.

	Manitoba.			Saskatchewan.			Alberta.		
	1917.		1918.	1917.		1918.	1917.		1918.
	Acreage.	Pro- duction.	Acreage.	Acreage.	Pro- duction.	Acreage.	Acreage.	Pro- duction.	Acreage.
Wheat.....	2,448,860	41,039,700	2,983,702	55,947,900	Bush.	8,273,250	117,921,300	Bush.	106,366,500
Oats.....	1,500,000	45,375,000	1,714,894	63,451,000	4,521,600	123,213,600	4,988,499	134,689,500	2,537,900
Barley.....	708,000	15,930,000	1,102,985	31,986,000	669,900	14,067,900	9,699,296	14,160,700	472,100
Flax.....	16,300	146,700	107,961	1,484,500	753,700	4,710,600	840,957	5,466,200	139,800
Rye.....	37,000	638,300	240,469	5,110,000	53,250	998,400	123,500	1,667,300	30,880
Roots.....	36,900	4,106,000	54,910	10,819,800	78,804	10,737,000	69,553	9,154,200	59,864
Mixed Grains.....	1,400	43,400	30,309	1,121,400	39,500	1,264,000	23,449	492,500	24,027
		Tons.		Tons.		Tons.		Tons.	
Fodder Crops.....	89,200	141,700	89,940	150,000	285,433	416,200	333,246	435,300	528,894
									798,800
									493,985
									451,150

## LIVE STOCK.

	Manitoba.			Saskatchewan.			Alberta.		
	1917.		1918.	1917.		1918.	1917.		1918.
	Horses.	Cattle.	Sheep.	Swine.	Horses.	Cattle.	Sheep.	Swine.	Horses.
*1901.....	163,867	349,886	29,464	126,459	83,461	217,053	73,097	27,753	93,001
*1906.....	215,819	521,112	28,975	200,509	240,566	472,834	121,290	123,916	226,534
*1911.....	280,374	435,568	37,322	188,416	507,468	633,638	114,216	286,295	407,153
1912.....	293,776	415,601	40,800	183,370	551,645	646,140	114,810	344,398	451,573
1913.....	304,088	409,718	42,840	184,745	580,386	663,098	115,568	386,784	484,809
1914.....	316,707	408,302	45,303	186,276	609,521	679,060	126,027	454,703	519,424
1915.....	317,847	404,097	50,880	163,308	755,293	755,293	133,311	411,324	544,772
*1916.....	324,175	554,158	76,750	205,898	841,907	1,011,393	124,237	530,727	1,160,090
1917.....	324,175	560,047	80,588	175,013	880,301	1,211,090	127,892	573,938	718,317
1918.....	384,772	746,899	136,782	284,596	990,009	1,279,331	134,177	521,240	791,246
									1,691,582
									332,179
									292,620
									603,554
									730,237
									601,534

\*Census.

## AGRICULTURAL LOAN ACTS IN MANITOBA.

### 1. *The Manitoba Farm Loans Act (March 9, 1917).*

This Act provides that persons residing or intending to reside on land within the province may obtain through the Manitoba Farm Loans Association, on first mortgage security, loans up to fifty per cent (50 per cent) of the appraised value of the property offered, extending over a period of thirty years at a rate of interest not exceeding six per cent (6 per cent) per annum, repayment being made on an amortization basis by equal annual payments composed of principal and interest. The loan must be made to make improvements, to increase productiveness or to pay off prior encumbrances on the land. It also makes provision for each borrower to become a shareholder in the Association by investment in its capital stock of an amount equal to five per cent (5 per cent) of the sum borrowed, and none other but borrowers and the province of Manitoba can hold such shares.

### 2. *An Act respecting Rural Credits.*

A rural credit society may be initiated by a petition, addressed to the Lieutenant-Governor-in-Council and sent to the Provincial Secretary, signed by not less than fifteen farmers. The society cannot commence business until at least thirty-five have subscribed \$3,500 and ten per cent paid in. The management of the business of the society is vested in a board of directors composed of nine members. Loans are made only for the purchase of feed, seed, implements, live stock and farming operations. Loans must be repaid within the calendar year at a date agreed upon. The rate of interest charged is not greater than seven per cent per annum, of which one-seventh goes to the society. A lien is taken on all machinery, goods or personal property purchased with the loan made. In the event of a borrower's defaulting, the society pays the lender and then seeks to recover the amount so paid from the borrower by any means authorized by any statutes applicable thereto.

## AGRICULTURAL LOAN ACTS IN SASKATCHEWAN.

1. *Farm Loans Act.*—Under the administration of a Board of three appointed by the Lieutenant-Governor-in-Council this act makes provision for the lending to agriculturalists of money on first mortgages for the purpose of improvement of properties, the payment of liabilities; the acquisition of land or for any other purposes approved by the Board. The loan is limited to fifty per cent of the value of the land. All loans are for thirty-years repayable in equal annual instalments with interest sufficient to realize a sum equal to the interest on the money raised by the Board to provide the loan together with the expenses of management.

2. *An Act respecting the purchase and sale of live stock by the Provincial Department of Agriculture.*

This act provides for an appropriation of \$500,000 by the Provincial Legislature for the purpose of purchasing live stock to be sold to agriculturalists for cash or partly cash and partly credit in which latter case a lien is taken on the animals till they are paid for.



3. *Co-operative Farm Mortgage Association Act*.—This act makes provision whereby a society of at least twenty-five agriculturalists may be formed by petition to a Board of three commissioners appointed by the Provincial Government. Each member of the society must be an applicant for a loan and must give security for fifty per cent of the loan which is made on a first mortgage only, and which is limited to forty per cent of the value of the farm property.

## AGRICULTURAL LOAN ACTS IN ALBERTA.

1. *Alberta Farm Loan Act*.—This Act provides for the lending of money on first mortgages on farm lands up to 40 per cent of their appraised value. The loan is limited to \$5,000 to any one person. The rate of interest charged is sufficient to pay interest on bonds issued to provide funds for loan purposes together with office expenses. The mortgage is for 30 years repayable in equal annual instalments. The loan business is administered by a Farm Loan Board, the general management of which is in the hands of a Commissioner of Farm Loans appointed by the Lieutenant-Governor in Council.

2. *Alberta Co-Operative Credit Act*.—This Act makes provision whereby a society of at least thirty agriculturalists may be formed by petition to the provincial treasurer. Each must subscribe \$100 and pay \$20 on account in cash. Certificate of registration is then granted by the Government; officers are elected and arrangements made with the banks to loan money on notes endorsed by the society. Loans are only made for the purpose of buying feed, seed, live stock and implements or for paying for season's operations. The loan must be repaid in one year. The rate of interest charged is agreed upon between the society and lender. Until the loan is repaid the society holds a lien on the animals or machinery purchased. The profits are applied to expenses, dividend and reserve.

3. *Live Stock Encouragement Act*.—Any five or more agriculturalists may form an association and may jointly apply to the Live Stock Commissioner for a loan not to exceed \$500 each for the purchase of cows and heifers. The Commissioner notifies the lender as to the amount of the guarantee he will make and how much each member of the association is to receive; 10 per cent of the joint loan may be used by one or more members for the joint purpose of a pure bred bull. The lender then takes the joint and several notes from the members of the association. The loan is repayable within five years with interest at not more than 6 per cent payable yearly. The lender also collects from each purchaser in the association \$1 expense money for each \$100 of his portion of the loan to be borrowed. The Provincial Treasurer guarantees the loan to the lender, who then deposits the money to the joint credit of the borrowers and the Live Stock Commissioner. The live stock purchased are branded and no attachment can issue against them. The purchaser cannot dispose of these cattle until the note is paid off.

## \*MINERALS

## MINERAL PRODUCTION OF MANITOBA, 1916 AND 1917.

Product.	1916.		1917.	
	Quantity.	Value.	Quantity.	Value.
Copper.....Lbs.			1,116,000	\$ 303,329
Gold.....Ozs.			440	9,095
Silver....."			7,201	5,863
Calcined Gypsum.....Tons.	28,489	\$ 191,283	33,347	258,934
Clay products.....		104,248		114,651
Lime.....Bush.	355,301	83,754	393,982	92,932
Cement.....Brls.	427,293	794,897	544,949	1,175,669
Sand-lime brick.....No.	3,215,097	33,048	5,070,500	76,742
Stone.....		372,894		301,968
Other products.....		243,452		289,081
Total.....		1,823,576		2,628,264

\*Department of Mines, Ottawa.

## MINERAL PRODUCTION OF SASKATCHEWAN, 1916 AND 1917.

Product.	1916.		1917.	
	Quantity.	Value.	Quantity.	Value.
Coal.....Tons.	281,300	\$441,836	355,445	\$662,451
Clay products.....		78,668		78,251
Sand-lime brick.....No.	990,000	9,890	674,500	7,674
Other products.....		60,079		112,275
Total.....		590,473		860,651

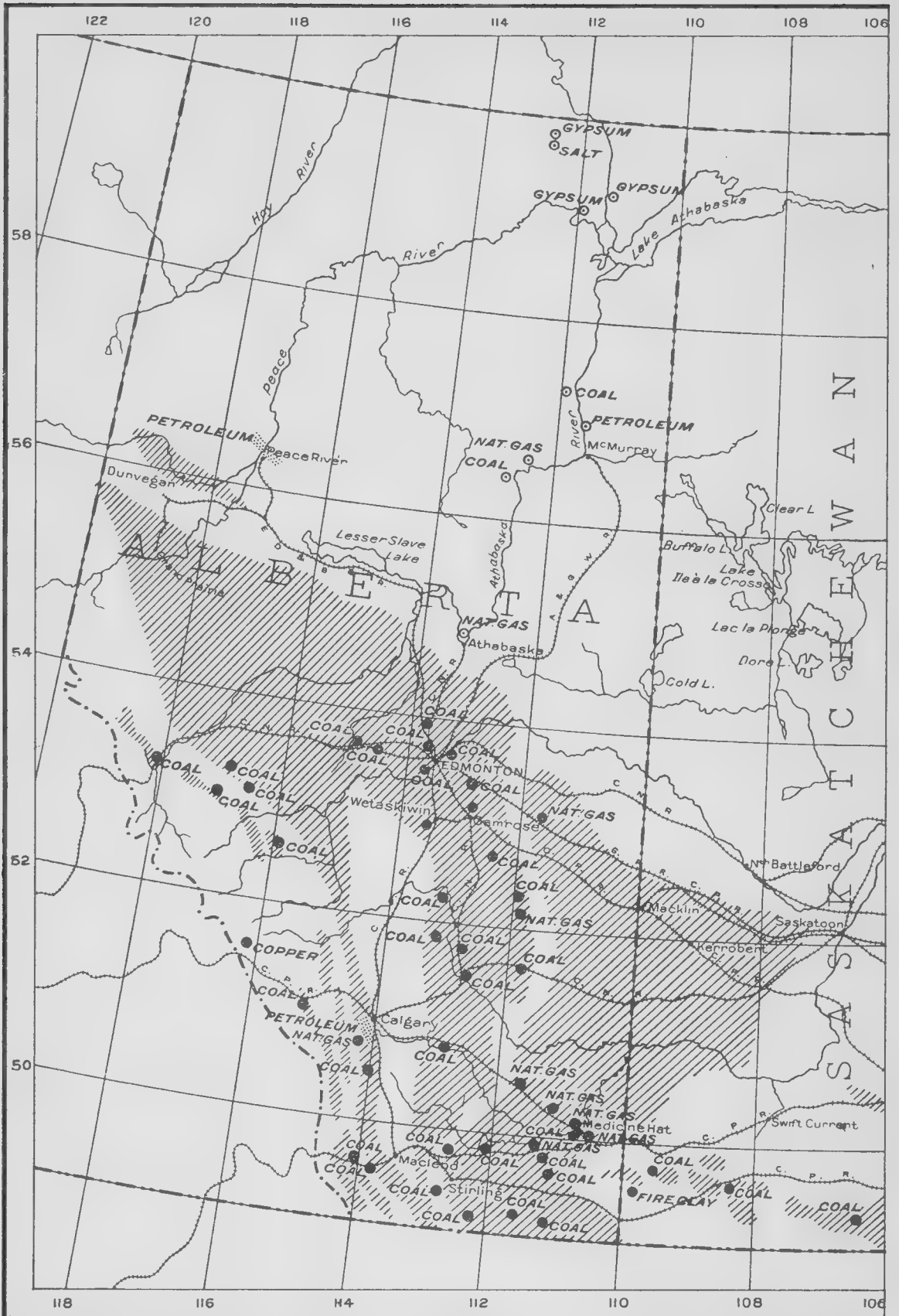
## MINERAL PRODUCTION OF ALBERTA, 1916 AND 1917.

Product.	1916.		1917.	
	Quantity.	Value.	Quantity.	Value.
Gold.....Ozs.	82	\$ 1,695		
Coal.....Tons.	4,559,054	11,386,577	4,736,368	14,153,685
Natural gas.....M cu. ft.	6,904,231	1,113,296	6,744,130	1,299,976
Petroleum.....Brls.			8,500	63,302
Cement....."	275,727	477,832	259,423	567,969
Clay products.....		225,140		309,991
Lime.....Bush.	78,019	20,033	104,540	35,516
Sand-lime brick.....No.	697,500	5,571	1,547,590	15,703
Stone.....		257		7,482
Other products.....		67,142		73,911
Total.....		13,297,543		16,527,535

\*MINERAL AREAS AND QUARRY LANDS SOLD OR LEASED IN MANITOBA,  
SASKATCHEWAN AND ALBERTA UP TO THE 31ST MARCH, 1919.

Sold or Leased.	Manitoba.	Saskat- chewan.	Alberta.
	acres.	acres.	acres.
Coal lands sold.....		7,369	239,585
Mining lands, other than coal, sold.....	7,694	335	19,702
Coal lands leased.....		8,421	332,165
Quarry lands leased.....	2,250	1,098	4,072
Petroleum and natural gas lands leased.....	1,213	44,274	1,209,888
Tar sands lands leased.....			2,040
Quartz mining lands leased.....	366		

\*Mining lands and Yukon Branch, Department of the Interior.







## WATER POWERS\*

Cheap power is a resource essential to the development of other natural resources. Water power is a prime mover which can be used directly for mechanical operations or indirectly through the medium of electricity. In other words, power can be used either at the site or at a distance therefrom. Improvements in electrical transmission have greatly widened the effective radius of water power and have brought distant markets, hitherto unsupplied, within reach of the power site.

No part of Canada is more fortunate with respect to its power producing agencies than the Prairie Provinces. Where there is no water power within economic transmission range, there are unlimited coal reserves. In the province of Manitoba there is sufficient water power available within economic transmission range of present settlements to meet all anticipated demands for many years. The Winnipeg river, one of the best naturally regulated rivers on the continent, will furnish sufficient power to meet the industrial demands of a population of 3,000,000 people. In the foothills of Alberta there are undoubtedly many water power sites capable of economic development as soon as there is a demand for the output. For instance, there is now installed on the Bow river, a short distance from Calgary, hydraulic equipment capable of producing approximately 30,000 h.p. There are also several additional power sites on the river, all of which are capable of producing sufficient power for a population of 300,000 people.

A large number of the larger power sites of the Prairie Provinces are remote from the centres of population and from the transportation systems. Recent exploration has, however, revealed the existence of promising mineral resources in the northern country and there is indication that these resources are widespread and of considerable magnitude. If this is the case their future development will require large quantities of power and it may prove to be a remarkable coincidence that nature has provided the necessary power adjacent to or within easy transmission distance of these resources.

By no means all of the power possibilities of the Prairie Provinces have been investigated and detailed information is available for only a few of the possible power sites, but sufficient general information has been gathered to render possible the formation of a fair estimate of the amount of power available on the main rivers.

The following table outlines briefly the power available on the main rivers of Manitoba, Saskatchewan and Alberta.

### MANITOBA.

River.	Undeveloped Power.	Horsepower Developed.
	H. P.	H. P.
Little Saskatchewan.....		1,125
Winnipeg.....	295,820	81,320
Saskatchewan.....	53,200	
Nelson.....	2,445,000	
Churchill.....	†274,750	
Burntwood.....	5,000	
Grass.....	5,000	
Dauphin.....	16,960	
Pigeon.....	14,900	
Berens.....	7,300	
Bloodvein.....	2,670	
Total.....	3,120,600	82,435

\* Dominion Water Power Branch, Department of the Interior.

† Lower reaches of Churchill River have not been investigated.

## SASKATCHEWAN.

River.	Undeveloped Power.	Horsepower Developed.
	H. P.	H. P.
Churchill.....	311,150	
Reindeer.....	93,070	
Sturgeon-Weir.....	5,660	
Rapid.....	5,927	
Saskatchewan.....	72,240	
North Saskatchewan.....	3,439	
Total.....	491,486	

## ALBERTA.

Slave.....	313,500	
Peace.....	19,000	
Athabaska.....	97,795	
North Saskatchewan.....	10,800	
Brazeau.....	2,360	
Red Deer.....	1,616	
Elbow.....	7,600	
Bow.....	14,595	32,380
Spray.....	1,532	
Total.....	468,798	32,380

## SYNOPSIS OF DOMINION WATER-POWER REGULATIONS

1. An applicant who contemplates the development of a water power must submit an application in writing, giving certain general specified information, including facts on both the engineering and financial aspects of the proposed undertaking.
2. Upon the consideration of such information the Department may, if it approves of the proposed project, enter into an agreement with the applicant for a power development.
3. No priority of right whatever is obtained by making a formal application. All pending applications are considered and a license may be issued to such applicant as the Department considers offers the best scheme.
4. If, after investigation by the Department's engineers, an applicant's scheme is approved, a formal agreement may be made consisting of a license and lease which run concurrently for a period of twenty-one years, renewable for three additional periods of twenty-one years or eighty-four years in all, unless terminated earlier under the provisions of the regulations.
5. The agreement provides that the work must be diligently carried on according to the plans approved of, that actual construction work must be started within a certain time, that a minimum amount of money must be expended in each year of the life of the agreement on actual construction operations, and that a minimum amount of power, to be determined by the Department, must be developed within a period not to exceed five years.
6. Rentals are revisable at the end of each twenty-one year period, or the Government may, at such time, if deemed advisable, take over the works of the licensee upon payment thereof of an amount to be fixed by arbitrators.
7. The regulations require the development of power in keeping with the demand.
8. Provisions are made for the adjustment of rates and prices charged to the public for power.
9. The regulations provide that the Department may control the manner of diverting the waters authorized so as to promote the maximum advantageous development of the power resources of the river on which the site is located, and may, from time to time, order such improvements or enlargements in any scheme as are considered necessary to insure the proper development of available resources.

## FISHERIES\*

## YIELD AND VALUE OF THE FISHERIES IN THE PROVINCE OF MANITOBA DURING THE CALENDAR YEAR, 1917.

Kind of fish.	Quantity.	Value.
Trout.....Cwt.	1,561	\$ 10,927
Whitefish....."	52,419	390,321
Pickereel....."	49,728	345,179
Pike....."	42,013	208,846
Sturgeon....."	3,621	51,080
Mullets....."	10,013	22,026
Perch....."	8,599	42,995
Tullibee....."	52,646	263,230
Cat-fish....."	400	2,600
Goldeyes....."	7,982	39,084
Mixed fish....."	74,640	158,750
Cavaire.....lbs.	5,500	8,250
Total.....		1,543,288

## MANITOBA FISHING LICENSES.

*Domestic Permit.*—Any resident settler, including Indian, shall be eligible for an annual fishing permit to fish with not more than one hundred yards of gill-net or with a dip-net or with not more than fifty baited hooks, for domestic use, but not for sale or barter. Such permit shall be issued free.

*Commercial License.*—A commercial license for dip-net fishing shall authorize the use of one dip-net for the capture of suckers and other coarse fish not protected by a close season. The fee on such license shall be two dollars.

Commercial fishing is allowed in the larger lakes of Manitoba, and in most cases a limit is set, on the amount of fish that may be taken during the summer or winter season, on the amount of fishing contrivance to be used, and on the time the various kinds of fish may be taken. The fees range from two to fifty dollars.

*Sturgeon License.*—A sturgeon fishing license for commercial fishing shall authorize the use of not more than five hundred yards of gill-net or five hundred baited hooks. The fee on such license shall be five dollars.

A sturgeon fishing permit for domestic fishing shall authorize the use of not more than one hundred yards of gill-net or fifty baited hooks, and under this permit not more than three sturgeon may be taken in one week.

A license to authorize the use of not more than two hundred baited hooks for the capture of catfish may be issued for any of the waters of the province. The fee on such license shall be two dollars.

## YIELD AND VALUE OF THE FISHERIES IN THE PROVINCE OF SASKATCHEWAN DURING THE CALENDAR YEAR, 1917.

Kind of Fish.	Quantity.	Value.
Trout.....Cwt.	3,696	\$ 18,594
Whitefish....."	43,301	197,920
Pickereel....."	5,831	28,314
Pike....."	9,697	45,916
Sturgeon....."	60	600
Perch....."	26	128
Tullibee....."	1,124	5,699
Goldeyes....."	65	429
Mixed fish....."	8,372	22,638
Total.....		320,238

Cwt.—100 lbs.

\*Fisheries Branch, Department of Naval Service.



YIELD AND VALUE OF THE FISHERIES IN THE PROVINCE OF ALBERTA DURING  
THE CALENDAR YEAR, 1917.

Kind of Fish.	Quantity.	Value.
Trout..... Cwt.	322	\$ 3,182
Whitefish..... "	29,792	133,573
Pickerel..... "	5,239	19,996
Pike..... "	7,421	19,356
Tullibee..... "	999	3,862
Goldeyes..... "	84	696
Mixed fish..... "	1,177	3,335
Total.....		184,009

### SASKATCHEWAN AND ALBERTA FISHING LICENSES.

There are four classes of licenses issued, namely, domestic, fisherman's, commercial and sturgeon.

*Domestic License.*—Any resident who is a British subject or a bona fide homesteader shall be eligible for a domestic license, which will entitle him, or a member of his family, to fish with not more than sixty yards of gill-net, or with one hoop-net and a set line of not more than twenty baited hooks.

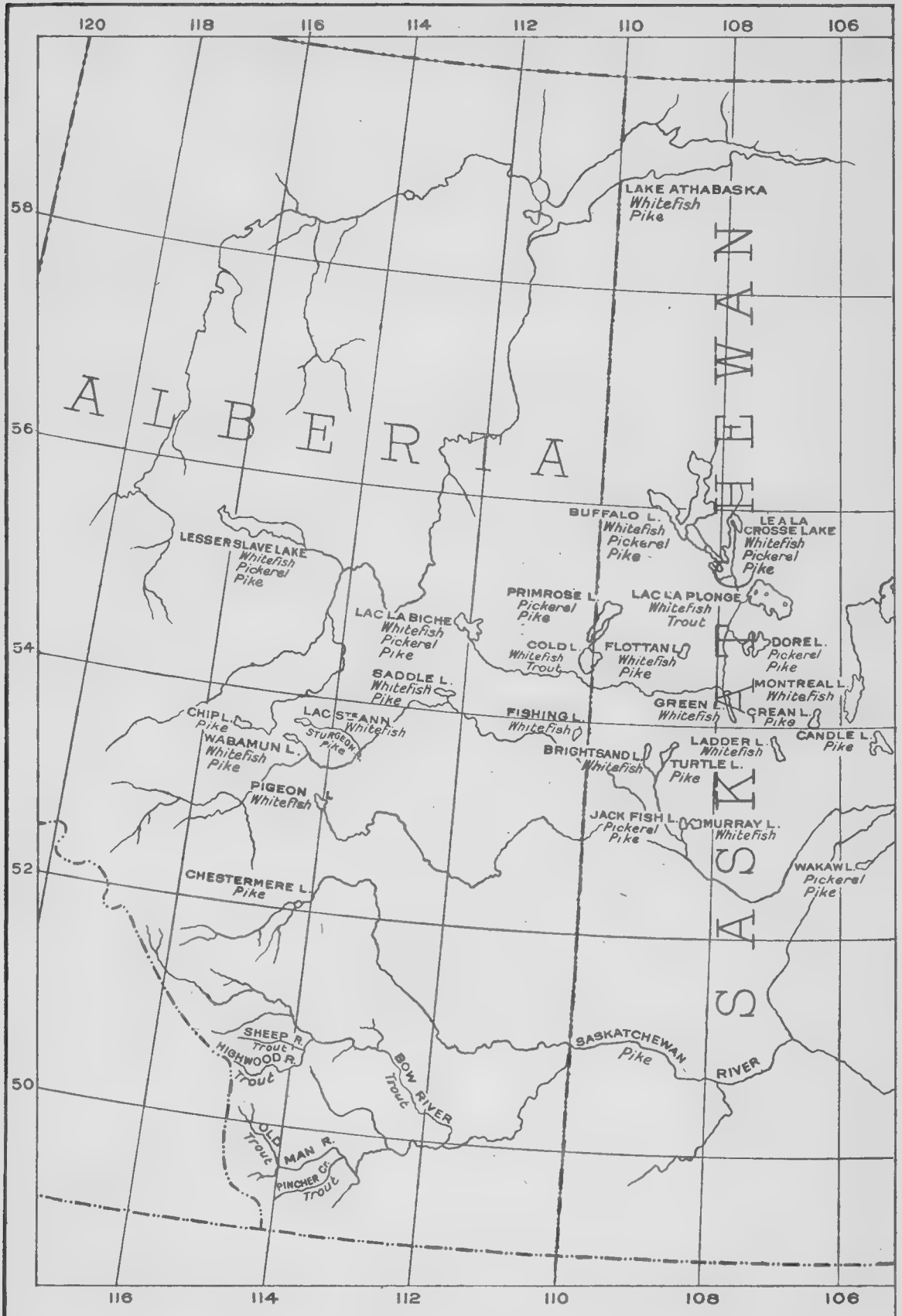
Fish caught under this license shall be for home consumption only and not for sale or barter. The annual fee for this license shall be two dollars.

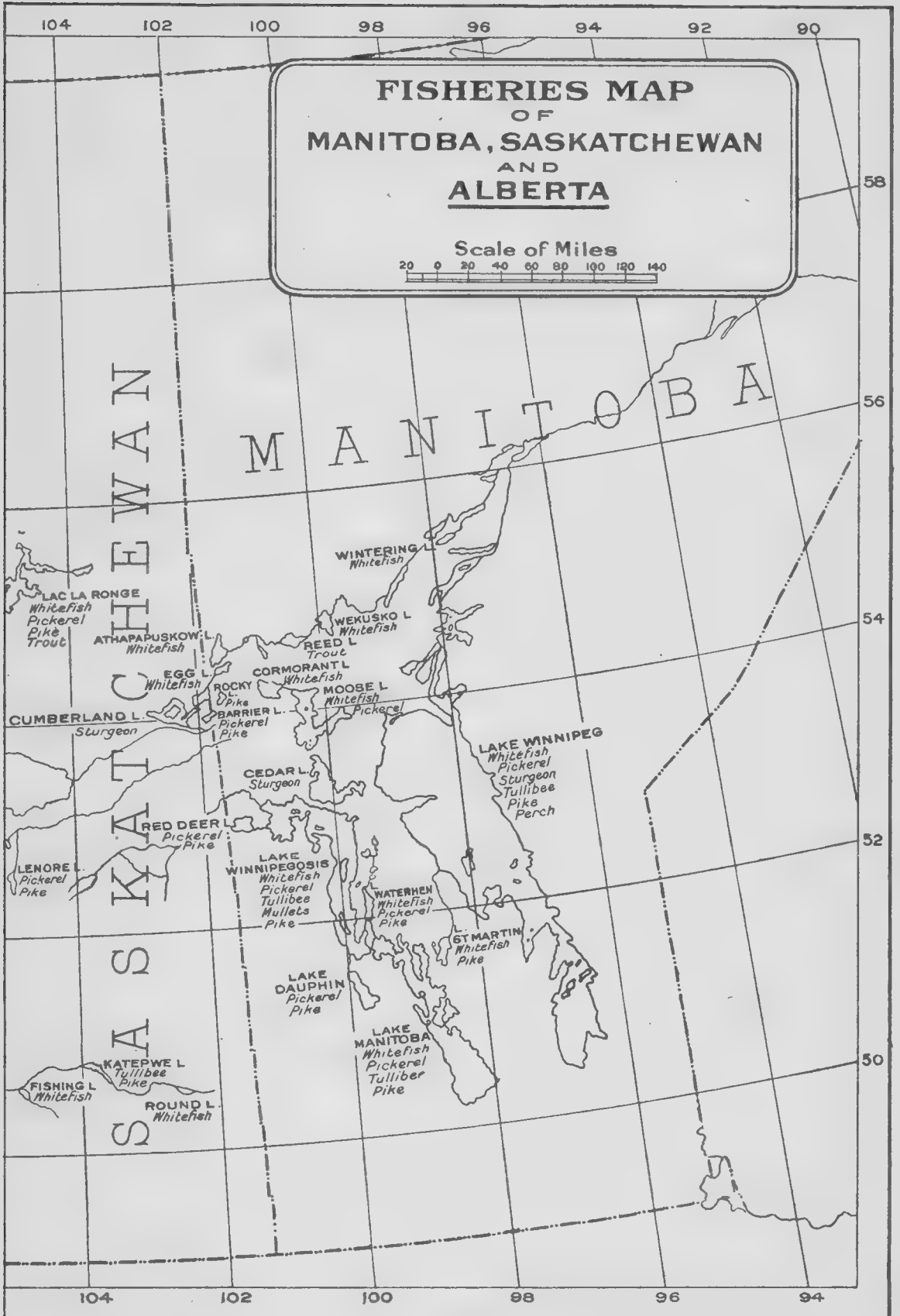
*Fisherman's License.*—Any resident who is a British subject or a bona fide homesteader shall be eligible for a fisherman's license, which will entitle him to fish with not more than three hundred yards of gill-net in the province of which he is a resident. The fee for this license shall be five dollars.

*Commercial License.*—Any resident who is a British subject shall be eligible for a commercial license, which will entitle him to fish with not more than six hundred yards of gill-net in the province of which he is a resident. The fee for this license shall be ten dollars. Such license will be issued for the larger lakes only and will be good for the season—summer or winter only—for which it is issued.

An Indian or half-breed permit, domestic license, fisherman's license or commercial license shall authorize the taking of all kinds of fish, except sturgeon.

*Sturgeon License.*—A sturgeon fishing license for commercial fishing shall authorize the use of not more than five hundred yards of gill-net or five hundred baited hooks, the fee is five dollars. A sturgeon fishing permit for domestic fishing shall authorize the use of not more than one hundred yards of gill-net or fifty baited hooks and under this permit not more than three sturgeon can be taken in one week.





## PARKS AND FORESTRY

## DOMINION PARKS.

Name.	Province.	Area.	Revenue Derived 1916-17.
		acres.	\$
Rocky Mountain.....	Alberta.....	1,152,000	40,290 93
Jasper.....	".....	2,816,000	2,828 73
Waterton Lakes.....	".....	270,720	1,332 00
Buffalo.....	".....	103,680	257 23
Elk Island.....	".....	10,240	8 25
Antelope.....	".....	5,020	205 20
Moose Mountain.....	".....	1,280	1 50

ESTIMATED AREA AND AMOUNT OF SAW TIMBER IN MANITOBA, SASKATCHEWAN  
AND ALBERTA.

	Estimated area covered by Saw Timber.	Estimated amount of Saw Timber.
	Acres.	Board ft.
Manitoba.....	1,920,000	6,850,000,000
Saskatchewan.....	3,584,000	14,000,000,000
Alberta.....	5,416,000	21,000,000,000

TIMBER SOLD AND REVENUE DUE ON LICENSE TIMBER BERTHS WITHIN  
DOMINION FOREST RESERVES, 1916-17.

## MANITOBA.

Forest Reserve.	Timber Berths.	Area in Reserve	Quantities Sold.			Revenue Dues and rent.
			Lumber.	Laths.	Other * Products.	
	No.	Sq. Mls.	Ft. B.M.	No.		\$ cts.
Riding Mountain.....	5	45.43	325,000			375 94
Duck Mountain.....	11	99.98	11,514,252			5,713 56
Total.....	16	145.41	11,839,252			6,089 50

## SASKATCHEWAN.

Porcupine and Pasquia.....	44	960 99	22,296,544			16,486 68
Sturgeon.....	12	177.78	37,573,287	8,226,500	4,021	17,335 72
Big River.....	3	260.77	34,135,316	16,538,150	6,811	14,046 99
Nisbet and Pines.....	5	116.80			3,004	583 15
Total.....	64	1,516.34	94,005,147	24,764,650	13,836	48,452 54

## ALBERTA.

Crowsnest.....	11	254.94	2,558,766		780,051	4,142 58
Bow River.....	15	374.44	6,540,403	974,300	4,473	6,654 59
Clearwater.....	4	377 56				1,887 80
Brazeau.....	11	177.64			35,307	2,598 00
Total.....	41	1,184.58	9,099,169	974,300	819,831	15,282 97

\* Includes cordwood, fence-posts, boom timber, piling, mine timber, railway cross-ties, etc.



TIMBER PERMITS ISSUED ON FOREST RESERVES, MANITOBA, SASKATCHE-  
WAN, AND ALBERTA, 1916-17.

Area.	No. of Permits.		Kinds and Quantities of Timber authorized to be Cut.					Dues and Fees.
	Free.	Paid.	Roof Poles, Fence Rails and Posts.	Saw Timber.	Mine Timber and Building Logs.	Green Fuel.	Dry Fuel.	
Sq. miles				Ft. B.M.	Lin. ft.	Cords.	Cords.	\$ cts.
Turtle Mountain....	109.25	129 15	610	14,000	360	.....	3,476	108 05
Spruce Woods.....	224.50	24 16	.....	.....	.....	.....	485	33 25
Riding Mountain....	1,499.00	273 465	25,248	2,126,276	56,086	103	5,998	4,997 22
Duck Mountain....	1,543.25	89 143	8,620	803,800	16,827	.....	3,118	1,706 33
Moose Mountain....	156.00	49 93	5,277	.....	4,312	210	1,322	252 90
Beaver Hills.....	99.00	46 3	250	.....	3,200	.....	375	39.75
Porcupine.....	4,024.25	95 25	38,576	742,484	3,670	.....	1,228	807 75
Pasquia.....	2,615.00	24 40	8,926	174,555	13,250	400	4,038	1,456 95
Fort à la Corne....	513.00	75 45	88,548	377,550	10,125	.....	1,818	166 80
Pines.....	166.15	29 32	10,090	39,750	4,945	12	1,020	172 85
Nisbet.....	149.49	49 55	38,100	111,000	245	.....	2,233	661 95
Big River.....	1,342.00	33 .....	27,100	95,750	1,600	.....	592	8 00
Steep Creek.....	7.00	16 13	6,365	24,500	210	.....	406	39 60
Keppel.....	86.25	168 69	29,465	1,300	71,600	397	1,965	185 00
Sturgeon.....	729.00	1 .....	2,900	9,250	.....	.....	25	0 25
Elbow.....	119.00	29 17	425	.....	500	6	255	18 25
Manito.....	179.65	42 35	27,006	.....	14,500	179	671	91 70
Dundurn.....	63.25	12 .....	.....	.....	.....	.....	300	3 00
Cypress Hills.....	178.50	288 130	95,166	29,000	113,555	153	2,252	421 97
Seward.....	30.75	.....	.....	.....	.....	.....	.....	.....
Crownsnest.....	1,248.50	90 55	18,235	.....	129,456	.....	1,791	570 67
Bow River.....	3,123.00	27 19	10,235	.....	14,616	.....	561	116 50
Clearwater.....	4,877.00	24 7	.....	.....	10,500	.....	775	90 25
Brazeau.....	1,867.15	8 11	350	.....	121,400	.....	279	406 00
Cooking Lake.....	95.50	26 15	250	.....	12,180	.....	720	76.40
Athabaska.....	3,158.00	.....	.....	.....	.....	.....	.....	.....
Lesser Slave.....	5,023.00	.....	.....	.....	.....	.....	.....	.....
Total.....	33,226.44	1,646 1,303	441,743	4,549,215	603,137	1,460	35,703	12,431 39

# GAME LAWS 1918.

**OPEN SEASON WHITE**

**CLOSED SEASON    BLACK**

# MANITOBA

**BAG LIMIT**— Deer, etc., one male adult only. Ptarmigan, 15 a day, total 50 for the season. Goose 10 a day. Ducks, 20 a day during the last fifteen days of September, 40 a day during remainder of open season. Penalties \$10.00 to \$500.00 or imprisonment.

[illegible]

## SASKATCHEWAN

**BAG LIMIT** – Big game, 1 Moose, 1 Elk, 2 Deer, 2 Caribou, males only, but not more than two animals in all. Ducks and Geese, 50 a day, total 250 for season.  
Penalty for violation of Law \$10.00 to \$1,000.00 or imprisonment.

[illegible]

## ALBERTA

**BAG LIMIT**— Big game, adult male only. —2 Sheep, 2 Goats, 1 Caribou, 1 Moose, 1 Deer, 30 Ducks in one day, or 200 in the season. 10 Grouse, Partridge, Ptarmigan, and Prairie Chicken in one day or a total of 100 birds in a season. 5 Hungarian Partridge in one day or 25 in one season. Penalty \$10.00 to \$500.00 or imprisonment.

[illegible]

## GAME

## MANITOBA GAME LICENSE FEES, 1918.

## Resident—

Big Game.....	\$ 4.00
Game Bird.....	1.00
Trappers.....	2.00
Fur Traders.....	10.00
Dog Trainers.....	10.00
Cold Storage.....	5.00

## Non-Resident—

Big Game.....	25.00
Game Birds.....	25.00
(Actually domiciled in British territory)	
Big Game.....	15.00
Game Birds.....	10.00
Dog Trainers.....	20.00
Trappers.....	100.00
(Actually domiciled within Canada)	
Trappers.....	25.00
Fur Traders.....	50.00

## SASKATCHEWAN GAME LICENSE FEES. 1918.

## Resident—

Big Game.....	\$ 5.00
(Domiciled in city, town, or village)	
Game Birds.....	1.25
Fur Dealer, North of Tp. 25.....	10.00
"    "    South of Tp. 26.....	2.00
Taxidermist.....	5.00

## Non-Resident—

Big Game.....	25.00
Game Birds.....	15.00
(Actually domiciled in Canada)	
Game Birds.....	5.00
Trappers.....	25.00
Fur Dealers.....	20.00

## ALBERTA GAME LICENSE FEES, 1918.

## Resident—

Big Game.....	\$ 2.50
"    (farmers).....	1.00
Game Birds.....	2.25
Camp helper.....	2.50
Guide.....	2.50

## Non-Resident—

General License.....	25.00
Game Birds.....	5.00
Trapper.....	25.00

NOTE.—The game laws are under the control of the Provincial Governments and are subject to change from season to season.

## SALE OF GAME LICENSES IN MANITOBA FOR YEAR ENDING NOVEMBER 30, 1917.

Kind.	Number.	Revenue.
Big Game.....	4,719	\$18,876
Game Bird.....	4,170	4,170
Non-resident (British subject).....	41	615
Non-resident (other than British subject).....	5	250
Resident Trappers.....	1,498	749
Non-resident Trappers.....	5	125
Resident Fur Traders, at \$5.....	141	705
"    "    at \$10.....	137	1,370
Non-resident Fur Traders.....	5	250
Dog Trainers.....	1	10
Non-resident Dog Trainers.....	5	100
Cold Storage.....	5	25

## SALE OF GAME LICENSES IN SASKATCHEWAN FOR YEAR ENDING APRIL 30, 1918.

Kind.	Number.	Revenue.
Resident bird game.....	9,090	9,090
Resident big game.....	2,250	10,125
Non-resident bird game (six days).....	44	110
"    "    (season).....	10	100
"    big game.....	11	275
Taxidermist.....	15	75
Permits to export game.....	30	71
Fur dealers' licenses at \$10 each.....	349	3,490
"    "    \$ 2 each.....	62	124
Non-resident fur dealers' licenses.....	24	480
Fur dealers' travelling agents' permit.....	79	79
Permits for Private Game Reserves.....	10	10
Cold storage licenses.....	8	8

## SALE OF GAME LICENSES IN ALBERTA FOR YEAR ENDING DECEMBER 31st, 1917.

Kind.	Number.	Revenue.
General Game (non-resident).....	40	1,000 00
Game Bird.....	24	120 00
Resident Big Game.....	833	2,082 50
Resident Farmer Big Game.....	3,979	3,979 00
Resident Game Bird.....	6,477	14,573 25
Guide's.....	16	40 00
Camp Helper's.....	11	27 50
Game Dealer's.....	26	260 00
Market Hunter's.....	54	270 00
Permits to export.....	64	507 00
Trappers (non-resident).....	5	125 00

## CLIMATE\*

## TEMPERATURE AND PRECIPITATION IN MANITOBA, 1916.

Month.		Brandon.	Winnipeg.	Dauphin.	Grand Rapids.	Le Pas.
JANUARY.	Elevation in feet.....	1265.	760.	957.	810.	860.
	Temperature in degrees Fahrenheit—					
	Highest.....	18.	22.	25.	18.	21.
	Lowest.....	-51.	-41.	-40.	-41.	-51.
	Mean.....	-13.	-7.	-6.	-11.	-16.
	Difference from average.....	-11.	-4.	-2.		
	Precipitation in inches—					
	Total.....	2.70	3.36	1.	1.15	.23
	Difference from average.....	+1.87	+2.39			
	Sunshine in hours—					
APRIL.	Total number.....	99.	90.			77.
	Difference from average.....	-11.	-20.			
	Possible number.....	267.	266.			250.
	Number of days of hail.....	0.	0.	0.	0.	0.
	Number of days below 32°.....	31.	31.	31.	31.	31.
	Temperature in degrees Fahrenheit—					
	Highest.....	65.	66.	72.	69.	69.
	Lowest.....	-1.	28.	7.	-9.	-12.
	Mean.....	35.	37.	41.	33.	33.
	Difference from average.....	-3.	0.	+3.		
MAY.	Precipitation in inches—					
	Total.....	.92	.30		.54	.20
	Difference from average.....	+ .17	- 1.18			
	Sunshine in hours—					
	Total number.....	175.	213.			238.
	Difference from average.....	-16.	+ 6.			
	Possible number.....	412.	412.			420.
	Number of days of hail.....	0.	0.	0.	0.	0.
	Number of days below 32°.....	23.	16.	15.	25.	22.
	Temperature in degrees Fahrenheit—					
	Highest.....	78.	75.	80.	63.	66.
	Lowest.....	20.	7.	21.	20.	17.
	Mean.....	49.	50.	50.	41.	44.
	Difference from average.....	0.	-1.	-2.		
	Precipitation in inches—					
	Total.....	1.59	2.47	2.10	5.08	5.40
	Difference from average.....	+ 0.29	+ 0.46	- 0.23		
	Sunshine in hours—					
	Total number.....	187.	220.			184.
	Difference from average.....	-41.	-31.			
	Possible number.....	476.	476.			493.
	Number of days of hail.....	0.	0.	0.	0.	0.
	Number of days below 32°.....	9.	7.	5.	20.	7.

\*Compiled from information furnished by the Meteorological Service of Canada.

Month.	—	Brandon.	Winnipeg.	Dauphin.	Grand Rapids.	Le Pas.
JUNE.	Temperature in degrees Fahrenheit—					
	Highest.....	80.	80.	80.	83.	78.
	Lowest.....	30.	34.	33.	23.	32.
	Mean.....	56.	58.	57.	54.	56.
	Difference from average.....	-5.	-4.	-4.	.....	.....
	Precipitation in inches—					
	Total.....	4.33	4.12	5.38	4.83	1.96
	Difference from average.....	+1.30	+0.68	+2.99	.....	.....
	Sunshine in hours—					
	Total number.....	190.	232.	.....	.....	249.
	Difference from average.....	-30.	-18.	.....	.....	.....
	Possible number.....	486.	486.	.....	.....	509.
JULY.	Number of days of hail.....	0.	1.	0.	0.	0.
	Number of days below 32°.....	1.	0.	0.	1.	1.
	Temperature in degrees Fahrenheit—					
	Highest.....	92.	95.	88.	89.	87.
	Lowest.....	37.	48.	45.	45.	52.
	Mean.....	69.	70.	70.	68.	69.
	Difference from average.....	+7.	+6.	+6.	.....	.....
	Precipitation in inches—					
	Total.....	2.63	2.84	1.64	1.99	1.39
	Difference from average.....	+0.30	+0.17	-1.69	.....	.....
	Sunshine in hours—					
	Total number.....	259.	311.	.....	.....	322.
AUGUST.	Difference from average.....	-18.	+21.	.....	.....	.....
	Possible number.....	488.	488.	.....	.....	509.
	Number of days of hail.....	0.	0.	0.	0.	0.
	Number of days below 32°.....	0.	0.	0.	0.	0.
	Temperature in degrees Fahrenheit—					
	Highest.....	97.	93.	96.	88.	86.
	Lowest.....	34.	38.	34.	35.	38.
	Mean.....	62.	65.	64.	62.	62.
	Difference from average.....	0.	+2.	+2.	.....	.....
	Precipitation in inches—					
	Total.....	2.22	2.35	1.03	1.62	3.20
	Difference from average.....	+0.33	-0.09	-1.42	.....	.....
	Sunshine in hours—					
	Total number.....	261.	278.	.....	.....	306.
	Difference from average.....	+11.	+21.	.....	.....	.....
	Possible number.....	445.	444.	.....	.....	455.
	Number of days of hail.....	0.	0.	0.	1.	2.
	Number of days below 32°.....	0.	0.	0.	0.	0.



Month.	—	Brandon.	Winnipeg.	Dauphin.	Grand Rapids.	Le Pas.
SEPTEMBER.	Temperature in degrees Fahrenheit—					
	Highest.....	82.	79.	75.	76.	72.
	Lowest.....	22.	27.	26.	28.	29.
	Mean.....	52.	54.	52.	50.	50.
	Difference from average.....	-2.	0.	-1.		
	Precipitation in inches—					
	Total.....	2.39	2.03	1.68	5.08	2.02
	Difference from average.....	+1.17	+0.11	-0.78		
	Sunshine in hours—					
	Total number.....	177.	172.			162.
	Difference from average.....	-5.	-8.			
	Possible number.....	377.	377.			379.
	Number of days of hail.....	1.	0.	1.	0.	0.
	Number of days below 32°.....	7.	5.	5.	7.	4.

## TEMPERATURE AND PRECIPITATION IN SASKATCHEWAN, 1916.

	Saskatoon	Prince Albert.	Battleford.	Swift Current.	Regina.	Kamsack.
Elevation in feet.....	1,571.	1,414.	1,622.	2,432.	1,885.	1,445.
JANUARY.	Temperature in degrees Fahr:—					
	Highest.....	17.	17.	20.	27.	27.
	Lowest.....	-15.	-53.	-61.	-49.	-56.
	Mean.....	-16.	-15.	-16.	-12.	-15.
	Difference from average.....	-18.	-12.	-14.	-21.	-11.
	Precipitation in inches—					
	Total.....	0.55	0.96	0.76	2.70	1.15
	Difference from average.....	+0.06	+0.09	+0.30	+2.04	+0.78
	Sunshine in hours—					
	Total number.....	71.		71.	56.	
	Difference from average.....			-34.		
	Possible number.....	256.		254.		
	Number of days of hail.....	0.	0.	0.	0.	0.
	Number of days below 32°.....	31.	31.	31.	31.	31.
APRIL.	Temperature in degrees Fahr:—					
	Highest.....	74.	75.	76.	80.	72.
	Lowest.....	14.	2.	15.	18.	2.
	Mean.....	38.	38.	40.	41.	36.
	Difference from average.....	+1.	+1.	+2.	+0.	-1.
	Precipitation in inches—					
	Total.....	0.64	1.21	0.73	0.62	0.56
	Difference from average.....	+0.27	+0.38	+0.32	-0.13	-0.17
	Sunshine in hours—					
	Total number.....	204.			197.	
	Difference from average.....				413.	
	Possible number.....	417.		418.		
	Number of days of hail.....	0.	1.	0.	0.	0.
	Number of days below 32°.....	19.	19.	18.	23.	20.

Month.		Saskatoon	Prince Albert.	Battle- ford.	Swift Current.	Regina.	Kamsack.
MAY.	Temperature in degrees Fahr.—						
	Highest.....	78.	78.	77.	79.	77.	75.
	Lowest.....	19.	20.	21.	23.	20.	24.
	Mean.....	47.	48.	48.	48.	48.	47.
	Difference from average.....	-3.	-1.	-4.	-3.	-2.	.....
	Precipitation in inches—						
	Total.....	2.45	4.38	2.77	1.59	1.89	2.21
	Difference from average.....	+0.86	+2.84	+1.08	-0.53	-0.09	.....
	Sunshine in hours—						
	Total number.....	198.	.....	.....	210.	.....	.....
	Difference from average.....	.....	.....	.....	.....	.....	.....
	Possible number.....	486.	.....	488.	478.	.....	.....
JUNE.	Number of days of hail.....	0.	0.	0.	0.	0.	0.
	Number of days below 32°.....	7.	3.	8.	9.	8.	9.
	Temperature in degrees Fahr.—						
	Highest.....	78.	77.	78.	79.	79.	77.
	Lowest.....	32.	30.	32.	28.	35.	28.
	Mean.....	56.	56.	57.	56.	55.	54.
	Difference from average.....	- 2.	- 1.	- 2.	- 4.	- 4.	.....
	Precipitation in inches—						
	Total.....	1.68	2.60	3.66	4.05	4.28	2.29
	Difference from average.....	- 0.83	- 0.03	+ 0.19	+ 1.00	+ 1.11	.....
	Sunshine in hours—						
	Total number.....	250.	.....	.....	230.	.....	.....
JULY.	Difference from average.....	.....	.....	.....	.....	.....	.....
	Possible number.....	498.	.....	501.	488.	.....	.....
	Number of days of hail.....	0.	0.	0.	1.	0.	0.
	Number of days below 32°.....	1.	1.	1.	1.	0.	2.
	Temperature in degrees Fahr.—						
	Highest.....	90.	86.	89.	91.	89.	87.
	Lowest.....	48.	46.	47.	44.	42.	38.
	Mean.....	66.	66.	66.	67.	68.	67.
	Difference from average.....	+ 3.	+ 4.	+ 2.	+ 1.	+ 4.	.....
	Precipitation in inches—						
	Total.....	4.79	3.88	2.11	5.29	5.02	1.13
	Difference from average.....	+ 2.25	+ 1.46	0.00	+ 2.78	+ 2.53	.....
	Sunshine in hours—						
	Total number.....	304.	.....	.....	335.	.....	.....
	Difference from average.....	.....	.....	.....	.....	.....	.....
	Possible number.....	502.	.....	503.	491.	.....	.....
	Number of days of hail.....	0.	0.	0.	0.	0.	0.
	Number of days below 32°.....	0.	0.	0.	0.	0.	0.

Month.		Saskatoon	Prince Albert.	Battleford.	Swift Current.	Regina.	Kamsack
AUGUST.	Temperature in degrees Fahr.—						
	Highest.....	83.	85.	84.	88.	87.	95.
	Lowest.....	37.	30.	34.	32.	34.	24.
	Mean.....	59.	60.	60.	61.	61.	59.
	Difference from average.....	- 1.	+ 1.	- 2.	- 3.	0.	.....
	Precipitation in inches—						
	Total.....	1.99	1.66	4.70	2.54	0.69	0.58
	Difference from average.....	- 0.18	- 0.87	+ 2.72	+ 0.65	- 1.17	.....
	Sunshine in hours—						
	Total number.....	288.			302.		
SEPTEMBER.	Difference from average.....						
	Possible number.....	452.		452.	446.		
	Number of days of hail.....	1.	1.	0.	1.	0.	0.
	Number of days below 32°.....	0.	1.	0.	1.	0.	4.
	Temperature in degrees Fahr.—						
	Highest.....	78.	80.	81.	81.	80.	80.
	Lowest.....	24.	26.	23.	25.	26.	19.
	Mean.....	49.	51.	52.	53.	50.	47.
	Difference from average.....	- 1.	+ 2.	0.	0.	- 1.	.....
	Precipitation in inches—						
	Total.....	1.38	1.00	1.05	1.46	4.14	3.21
	Difference from average.....	- 0.08	- 0.44	- 0.21	+ 0.13	+ 2.95	.....
	Sunshine in hours—						
	Total number.....	178.			165.		
	Difference from average.....						
	Possible number.....	378.		378.	377.		
	Number of days of hail.....	0.	0.	0.	1.	0.	0.
	Number of days below 32°.....	11.	7.	3.	1.	8.	12.

## TEMPERATURE AND PRECIPITATION IN ALBERTA. 1916

		Fort Vermilion.	Grande Prairie.	Athabaska	Edmonton.	Calgary.
JANUARY.	Elevation in feet.....	900.	1350.	1650.	2158.	3428.
	Temperature in degrees Fahrenheit—					
	Highest.....	22.	26.	32.	29.	36.
	Lowest.....	-60.	-43.	-58.	-45.	-41.
	Mean.....	-20.	-15.	-17.	-13.	- 8.
	Difference from average.....	- 9.	.....	-13.	-21.	-21.
	Precipitation in inches—					
	Total.....	0.40	1.20	1.08	1.09	0.79
	Difference from average.....	-0.07	.....	+0.41	+0.38	+0.33
	Sunshine in hours—					
	Total number.....	84.			91.	.....
	Difference from average.....				+12.	.....
	Possible number.....	218.			250.	.....
	Number of days of hail.....	0.	0.	0.	0.	0.
	Number of days below 32°.....	31.	31.	31.	31.	31.

Month.		Fort Vermilion.	Grande Prairie.	Athabaska.	Edmonton.	Calgary.
APRIL.	Temperature in degrees Fahrenheit—					
	Highest.....	62.	62.	69.	70.	76.
	Lowest.....	2.	21.	5.	17.	22.
	Mean.....	36.	40.	39.	42.	43.
	Difference from average.....	+4.	.....	+1.	+1.	+3.
	Precipitation in inches—					
	Total.....	0.09.	1.31.	0.54.	1.17.	0.85.
	Difference from average.....	.....	.....	-0.30.	-0.61.	+0.22.
	Sunshine in hours—					
	Total number.....	247.	.....	.....	219.	.....
MAY.	Difference from average.....	.....	.....	.....	+7.	.....
	Possible number.....	431.	.....	.....	419.	.....
	Number of days of hail.....	0.	0.	0.	0.	0.
	Number of days below 32°.....	28.	20.	19.	21.	23.
	Temperature in degrees Fahrenheit—					
	Highest.....	80.	73.	77.	75.	74.
	Lowest.....	25.	26.	24.	24.	23.
	Mean.....	48.	48.	46.	49.	46.
	Difference from average.....	0.	.....	-4.	-2.	-3.
	Precipitation in inches—					
JUNE.	Total.....	0.60.	0.22.	1.16.	1.77.	3.10.
	Difference from average.....	0.24.	.....	-0.51.	+0.01.	+0.62.
	Sunshine in hours—					
	Total number.....	275.	.....	.....	230.	.....
	Difference from average.....	.....	.....	.....	+8.	.....
	Possible number.....	519.	.....	.....	492.	.....
	Number of days of hail.....	2.	0.	0.	3.	0.
	Number of days below 32°.....	17.	8.	14.	9.	8.
	Temperature in degrees Fahrenheit—					
	Highest.....	87.	82.	79.	77.	82.
JUNE.	Lowest.....	30.	25.	28.	29.	34.
	Mean.....	59.	57.	54.	56.	56.
	Difference from average.....	+2.	.....	-2.	-1.	+1.
	Precipitation in inches—					
	Total.....	2.05.	0.41.	0.85.	2.62.	1.46.
	Difference from average.....	+0.38.	.....	-2.71.	-0.79.	-1.81.
	Sunshine in hours—					
	Total number.....	368.	.....	.....	264.	.....
	Difference from average.....	.....	.....	.....	+24.	.....
	Possible number.....	543.	.....	.....	506.	.....
JUNE.	Number of days of hail.....	0.	0.	0.	1.	0.
	Number of days below 32°.....	3.	1.	5.	1.	0.

Month.		Fort Vermi- lion.	Grande Prairie.	Atha- baska.	Edmon- ton.	Calgary.
JULY.	Temperature in degrees Fahrenheit—					
	Highest.....	88.	97.	.....	80.	87.
	Lowest.....	33.	34.	.....	38.	38.
	Mean.....	58.	56.	.....	60.	62.
	Difference from average.....	-2.	.....	.....	-1.	+2.
	Precipitation in inches—					
	Total.....	4.04.	3.98.	.....	3.31.	1.49.
	Difference from average.....	+2.44.	.....	.....	-0.44.	-1.11.
	Sunshine in hours—					
	Total number.....	270.	.....	.....	248.	.....
	Difference from average.....	.....	.....	.....	-25.	.....
	Possible number.....	540.	.....	.....	508.	.....
AUGUST.	Number of days of hail.....	0.	0.	.....	1.	1.
	Number of days below 32°.....	0.	0.	.....	0.	0.
	Temperature in degrees Fahrenheit—					
	Highest.....	83.	84.	84.	81.	85.
	Lowest.....	24.	27.	27.	32.	39.
	Mean.....	54.	56.	53.	53.	60.
	Difference from average.....	-4.	.....	+2.	-1.	+1.
	Precipitation in inches—					
	Total number.....	0.42.	0.47.	0.69.	3.70.	2.03.
	Difference from average.....	1.15.	.....	-1.15.	+1.65.	-0.49.
	Sunshine in hours—					
	Total number.....	318.	.....	.....	237.	.....
SEPTEMBER.	Difference from average.....	.....	.....	.....	-19.	.....
	Possible number.....	473.	.....	.....	455.	.....
	Number of days of hail.....	0.	0.	0.	0.	0.
	Number of days below 32°.....	6.	2.	2.	1.	0.
	Temperature in degrees Fahrenheit—					
	Highest.....	78.	78.	79.	79.	80.
	Lowest.....	23.	27.	21.	29.	23.
	Mean.....	46.	49.	49.	51.	52.
	Difference from average.....	0.	.....	+2.	+1.	+1.
	Precipitation in inches—					
	Total number.....	1.56.	0.52.	2.51.	2.80.	0.84.
	Difference from average.....	+0.15.	.....	+1.37.	+1.33.	-0.40.
	Sunshine in hours—					
	Total number.....	196.	.....	.....	175.	.....
	Difference from average.....	.....	.....	.....	-9.	.....
	Possible number.....	382.	.....	.....	379.	.....
	Number of days of hail.....	0.	0.	0.	1.	.
	Number of days below 32°.....	15.	5.	11.	3.	2.

